

A GROUP OF FRENCH BASQUES THRESHING WITH THE FLAIL.

VI.—THE FLAIL AND KINDRED TOOLS.

(From a historical and literary standpoint.)

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[Read on the 28th August, 1907.]

INTRODUCTORY.

Primitive man probably lived primarily on the fruits of the ground, supplemented in time by bivalve and fish, by beast and by bird. His materials would be wood and bone (if a countryman); or a stone and shell (if a dweller on the shore). His first weapon would be a stick or a stone, his first tool the pebble. Then in succession would come the roughly chipped flint, the more finished flake, and the polished stone; and as the long years rolled by would appear the time of bronze; and then the era of iron. Hence we speak of the Stone, the Bronze, and the Iron Ages of man. But perhaps it would be wise to speak also of an age of Wood, as old as, if not the most primitive of any.

Among ancient examples of wooden tools are those of agriculture, of which the flail is one, going back, as it probably does (through the simpler forms of bat and stick), to the first harvests of man. Such first harvests were apparently grown in the Stone Age, but however early the date, threshing implements must since then have continued to be in use. But when and where the flail succeeded its earlier predecessors is at present unknown. It is, however, quite probable that the simpler flail forms (those of wood; with wood or hide connexions) may have come down almost unchanged through the centuries. The tool was found in China and in Europe as early as the Christian era. The use of iron in flail construction appears to have varied; the early wood-

cuts (fourteenth century) seem to show an iron joint, but still earlier and still later cuts exhibit flexible joints of hide. The iron caps and swivels came in only about 1850 or so, for I know some who remember making the alterations for the old threshers. But iron was used in Norman and probably much earlier times in the construction of the war flails, such as 'the morning star' and other varieties.

I am inclined to think that threshing tools alone might give us valuable deductions of a historical character. Thus I have little doubt but that the flail appeared in Ireland before it reached Scotland, Wales, or England, and that the threshing tool of the Picts was a leaf-shaped 'bat.' A correct record of the agricultural implements of various races and periods, up to the beginning of last century (*i.e.* before the general introduction of machinery), would, I am sure, afford valuable data. For example, the early migrations of early tribes might be traced by their agricultural and other implements, which have changed little during the years, and which, with their names, have been handed down little altered from sire to son. Even when a race was conquered, its tools and its women were taken over and preserved by the victors. Thus implements and their names might check or corroborate the evidence of language and lineament. I believe, for example, that two of the lingual 'clicks' of the Zulu tongue pertain to domestic utensils of Bushman origin, and that they were given to the Zulu language by captured Bushmen women. I therefore contribute, as an appendix, a list of agricultural implements as they would appear on a Norfolk or Suffolk farm, when the flail was in full use, at about the year 1800. The list has been kindly compiled for me by Mr. W. Woods of Hadenham, Suffolk.

-- I have said that the first harvests of man were probably grown in the Stone Age. The evidence of this is found in the use of the sickle, a toothed implement, with which but a few

years ago we were reaping the harvests of Britain. In the time of Joseph (the first speculator to corner corn, as Mark Twain humorously points out) the sickle was in use; but long before Egypt even, in the days of the Swiss lake dwellers, there were sickles of bronze; and centuries before the houses on stakes there were semi-lunar chipped flints that seem to have answered the same purpose in the Stone Age of humanity.

But whether a harvest be reaped by sickles of stone or of steel, it is essential that the three processes of threshing, winnowing, and grinding, be employed in order to change the grain into bread. These three operations the schoolboy effects on a head of wheat by rubbing it in his hands, blowing away the chaff and grinding the grain with his teeth. And it may be that a pre-historic boy, stumbling on a patch of wild wheat, used his hands as threshers, and that the result was satisfactory enough to lead to the cultivation of cereals.

THE EVOLUTION OR DEVELOPMENT OF THRESHING OPERATIONS.

I am somewhat sceptical with regard to evolution, if by that be meant the evolving of the higher out of the lower. And in speaking of the evolution of threshing operations, I desire to use the term in the sense of the higher following the lower; in other words, in the sense of progression by steps. And I am venturing to give the following table as the probable sequence of events in the upward trend of the operations of threshing:

A SERIES.

1. The human hand.
2. The stick. The stone.
3. The bat.
4. The flail.

B SERIES.

1. The human foot.
2. The feet of animals.
3. The wheel of the cart.
4. The threshing sledge.

5. THE THRESHING MACHINE.

(Turned by hand, foot, animals, wind or water.)

6. THE STEAM THRESHER.

(Threshing, winnowing and 'hummelling' in one.)

Several of these tools or operations might be in use at the same time in the same country, but taking them in detail, we have:—

A1. The human hand as the first threshing appliance. 'They plucked the ears of corn, and did eat, rubbing them in their hands.' Maize is threshed by rubbing one cob against another. Striking the corn on an edged stone is also an early method and is still employed by the Basques in Spain. The edge of a board was used in Britain and the process was termed 'lashing' in Lancashire.

B1. The human foot. If a family in a prehistoric cave were rubbing out grain by hand, it is not impossible to suppose that a quick-witted woman might try treading out the heads with her stone-hardened feet. At any rate, we have a corresponding process in 'treading out the wine press,' and the feet are also employed in treading out the dough. As Macaulay¹ sings:

' And in the vats of Luna,
This year the must shall foam
Round the white feet of laughing girls
Whose sires have marched to Rome.'

But that it is not mere supposition to think of women treading out corn is proved from the Farøe Islands, where to-day the women tread out the heads of barley, preparatory to the use of the bat. This is probably a Pictish custom, which may be reflected in some of the Highlands, where boys in clogs were employed to trample off the beard of the barley. A portion of the Farøe people are Picts, and hence in Roman times British women (say at Rothbury) might be treading out the corn, as well as extracting tannin from tormentil roots and also perhaps grinding nodules of iron for smelting. The corn would be cut (the ears only), trod and threshed, and the grain ground probably

¹*Lays of Ancient Rome.*

by two stones. The roots and nodules might be ground in 'pot-holes' such as appear in the surface of the table rock near the Rothbury camp, forming the 'cup markings' of Simpson.

The Stick.—As cereals were cultivated, neither the foot nor the hand would be sufficient to thresh the crop, and a stick would naturally be thought of, first for one hand and then for both. Hence among the Hebrews 'a rod' and 'a staff' are both spoken of. The stick is

still used by primitive races. In Rhodesia the Matabele grain owner does not telephone for a steam thresher when the grain is gathered. He brews beer instead, and invites his neighbours to come and bring their staves. They arrive, and on a flat rock as threshing floor, in the shadows of the Matopos, where lies Britain's greatest colonist, they thresh



FIG. 1. ZULU WOMAN THRESHING WITH THE STICK.

away as long as the beer lasts. When it is finished, work stops. The custom of 'harvest beer' may have come down from days hoary with antiquity. But in savage communities, the agricultural as well as the domestic work falls to the lot of women, and among the Zulus the women generally beat out the Kaffir corn or mealies by means of a two-handed stick. This is effected on the knees, often with a baby on the back, who appears to enjoy the motion (fig. 1). In Cumberland, within living memory, two women have been known to beat out corn with sticks on a sheet

in the stackyard. And when gleaning was in vogue, the 'singles' (Yorks.), 'gleanings' (Northb.), or 'hands-full' (Essex), *i.e.* the little sheaves, were beaten out with a stick, often a young ash shoot ('ash plant') being employed. The 'bitting-stick' or 'battling-stick' (normally employed before wringing machines to beat out water from the clothes) was also used.

An Essex custom regarding gleaning is perhaps worth recording. When the harvest was led, a single sheaf was set up in the field to show that the horse rake had not yet gone over the ground and that the gleaners were forbidden to enter. On its removal they gleaned what was left, the farmer encouraging them, so as to avoid spilt corn springing up and destroying the clean rotation of crops. Gleaning thus was a mutual benefit. In some places the wives and children of the reapers, threshers, or taskers, termed 'tasker-leasers,' had a priority, and entered the harvest field first and gleaned before all comers were allowed to enter. In Essex, after the field was gleaned, the farmer set bushes in it to show that gleaning was over, and those who entered a bushed field became trespassers.

In the Old Testament a 'rod' would be employed by Ruth to thresh her gleanings, and Gideon probably used a 'staff' when 'threshing corn by the wine press.' The following passages (*Isaiah*, xxviii. v. 26-28) give a comprehensive account of the Hebrew methods of threshing:

'For the fitches are not threshed with a threshing instrument [mowrej or sledge], neither is a cart wheel turned about upon the cummin; but the fitches (beans) are threshed with a staff, and the cummin (poppies) with a rod.'

'Bread corn is bruised [sledge?]; because he will not ever be threshing it (as would be the case with staff or rod): nor break it with the wheel of his cart [with discs of iron]; nor bruise it with his horsemen' [treading out process].

The rod was probably a flexible stick, used in one hand, the stuff to be threshed being held in the other. The staff would be

a two-handled stick for beating a heap on the ground on the knees, or in a sitting position. The flail was probably not known or used in Palestine, though in the Bible of 1551, a portion of the above is there translated, 'He thresseth the fitches oute with a flayle.' This, I think, is now better translated 'staff.'

The Bat.—A leaf-shaped wooden bat was probably the threshing tool of the Ancient Britons, its progenitor being probably a broad leathery leaf. Such a leaf is used to-day in Ceylon. That the Picts and Britons used a 'bat' instead of a stick or flail is probable from the following considerations:—

1. Diodorus Siculus, writing in the first century B.C., tells us that the Britons gathered in their harvest by cutting off the

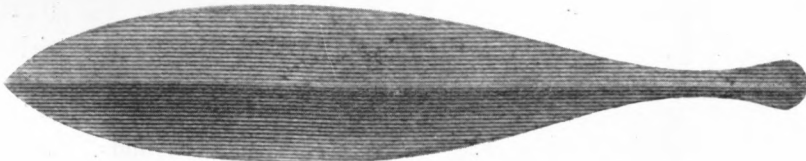


FIG. 2. THE TRESKYUTRIA.

Old or leaf-shaped threshing bat (*treskyutria*), figured by Landt, 1810. Farøe Islands. This is flat, and has a leaf-shaped outline, the stalk being the handle. The two more recent examples (from the Pitt-Rivers museum, Oxford) figured (see fig. 3) on page 162 are more like a cricket bat, with a thicker blade and not spliced. The handle is straight and joins the body at an angle, so that a kneeling woman can strike without bending. The blade front is flat, and the back rounded, and not so broad at the tip, which may be turned up. The tool is used on the knees with both hands by two women, who strike alternate blows. Probably the Ancient British used a similar implement for threshing their heads of corn.

ears of corn, storing them in subterranean granaries, and picking the oldest day by day for food. Now, a stick or flail would scatter the heads of corn and would be unsuitable threshing tools. Besides, the flail seems to have come in with the Scots (an Irish tribe) from Ireland, *i.e.* it was an Erse rather than a Pictish implement.

2. Again, in the Farøe Islands, there are still to be found pure Picts or Ancient Britons, who were carried there as slaves or 'thrals' by their Norwegian masters. These Norwegian nobles fled from Shetland, Orkney and the Hebrides, and pos-

sibly from Man and Ireland, before Harald Fairhair in A.D. 894 to Iceland, and to the Farøe Isles in the tenth century. And

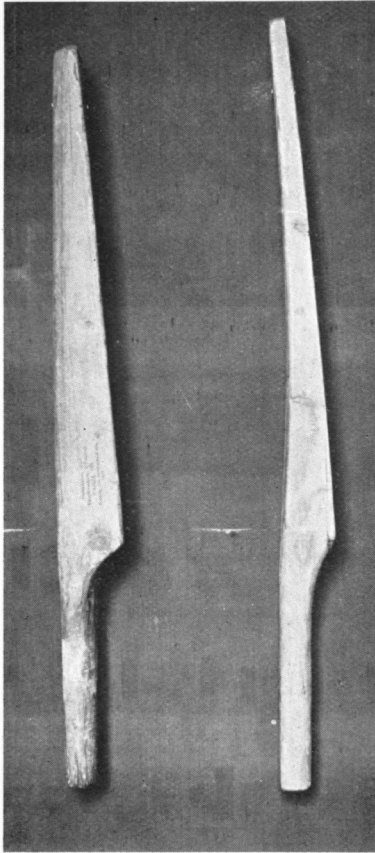


FIG. 3. THE TRESKYUTRIA.
(Farøe Isles.)

just as in the Isle of Man (conquered together with Dublin and other Norse colonies on the Irish coast) we find the Erse word 'tasker' to mean thresher and also slave, and as in Norway, one of the names for the flail is 'tarske-stav,' meaning flail, thresher's-staff, or perhaps slave's-staff, so in the Farøes the Norwegian masters would make the Pictish slaves from the Scottish Isles do their threshing. And these would naturally use their own tools and methods. It is interesting to note that the non-Norwegian people of the Farøes are little, dark, long-headed Picts, not the tall Irishman or Highlander, and that the bat, and not the flail, is employed.

The following is a description of the Farøe method of threshing: 'Barley is grown in little plots and seldom ripens. It is cut at Michaelmas and carried in wooden creels to the drying

houses, where the heads are separated from the straw. Then the straw is put upon a rack, over a peat kiln, and the ears are dried

upon the straw. A sloping door is placed upon the floor, and a certain quantity of ears put upon it. One to three women then place their backs towards the wall, and with their feet bruise the heads of corn pretty well. The women next place themselves on their knees, and with a leaf-shaped or bat-like tool of wood—the *treskyutria*—thresh or beat the corn, striking alternate blows.' I therefore think that a similar method would be employed for the same kind of threshing (*i.e.*, of the heads of corn only) in Roman and pre-Roman days in Britain. In other words, in all probability this is the Ancient British method of threshing corn. And the 'treskyutria' or 'gorthwyn' is almost certainly the

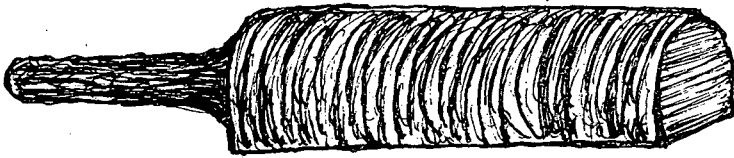


FIG. 4. WELSH THRESHING BAT OR 'GORTHWYN.'

Ancient British and Pictish threshing tool, there being a threshing bat in Wales termed a 'gorthwyn' or mallet, formerly used for threshing gleaned corn, which may be a survival of the Ancient British bat. (Figs. 2, 3 and 4.)

There is also another interesting reflection. The name 'gorthwyn' appears to be partly, if not entirely, British (*i.e.*, Celtic). It may perhaps be a British pre-Roman word. 'Tresk' may, of course, be Norse and mean 'thresh,' from 'taerste,' or 'traeske'; but after consulting Erse, Gaelic and Welsh authorities, and having acquired a sincere regard for the Celtic tongue, which is ancient, honourable and anything but easy, I find that 'tresk' (or 'tresg' in Erse) means 'trash' or chaff, and may perhaps be the true derivation. Against this, however, is the

term 'lattukodn' (meaning chaff) in the Farões, the derivation of which would seem to be neither Celtic nor Norse, at any rate as regards 'lattu.' The 'y,' however, seems related to the 'y' or 'yd' (Welsh), and the 'id' (Erse) for corn. Whilst 'utria' appears to be connected with the Celtic 'utrais' (a confused heap, and perhaps to 'utras' (contention or molestation).

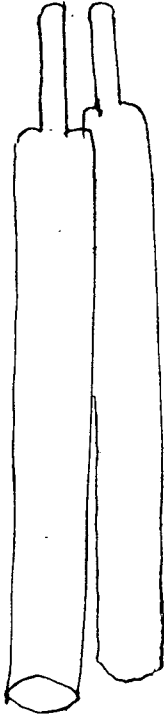


FIG. 5. JAPANESE
YOKODZUCHI OR
THRESHING BATS.

'Tresk-y-utria' is also somewhat reminiscent of the Basque term for the flail, viz., 'y-aurra' or 'idaurra,' or 'id-arbur,' the two former being Spanish-Basque, and the latter the French-Basque term. In Erse we have both 'id' and 'arbhar' as meaning corn. Again, the Basque 'idarbur-lari' (thresher) may have some relationship with the Manx term 'laarre-arroo' (threshing-floor), whilst 'lair' is Erse for ground or floor. Hence there would seem to be some relationship in the names of the Pictish or Ancient British, the Manx and Irish, and the Basque threshing appliances. But of course no attempt is made to show any *general* lingual likeness between Basque and Celtic, as there is none, the Basque language being unique and resembling that of the North American Indians. But the threshing tools of one people might well be copied with their names from another; for example, by the Basque sailors, who without difficulty could reach Ireland from the Bay of Biscay.

In Japan a wooden cylindrical 'bat' about one foot long, with one end narrowed into a handle, is sometimes employed instead of the flail. In this case a bat is held in either hand, the tool being termed a 'yokodzuchi' from 'yoko' (edgewise) and 'tsuchi' (mallet). (Fig. 5.)

In Ushant, off the coast of Finisterre, there is a threshing implement which, though a flail, seems to be a connecting link between the flail and the bat. It is a hand flail, with a flat or batlike beater, which the women use on their knees, striking alternate blows.

Treading-out Process.—Following possibly upon the treading out by women's feet, might arise the idea of treading out corn by oxen and other animals. On the open-air, earthen, threshing floors a large crop could thus be disposed of. In Egypt and Palestine oxen shod with brass were used, and the method is still in common use. Thus in Asia Minor mares after foaling are employed, horses are used in Italy, and mules in Spain and Algiers. The method is used in India, and extends as far as Spain and Morocco. It is also in vogue among the Dutch at the Cape, and the native tribes use their oxen when the crop is large. One of the greatest drawbacks of the treading-out process would be the presence of dust and dirt among the grain.

In Britain, though I have not come across any satisfactory record of the treading-out of corn by animals, yet the following from Norfolk has some bearing on the process. In the case of barley and beans the farmer sometimes would allow the threshers to use a horse to render the straw more 'playable and workable' for the flail; and men would sometimes get up early and take a horse by stealth and use it for this purpose. In getting a 'rick' or stack in, a horse was often used to tread down the 'goft' or 'goof,' so that more could be stowed and stacked. And horse treading was often resorted to when leading hay and corn, and the animal would sometimes be left on the stack all night, if it were a large one and could not be finished that night. A boy rode the horse and sometimes led another on the stack. And my informants add: 'There was small fear of the horse going near enough to the edge to fall down.' And that, 'when his services were dispensed with, a rope was slung round him, and while a

man or two on the ground hung on to the other end, two or three men would push the horse over the side, and he would slide down as easy as you please.'

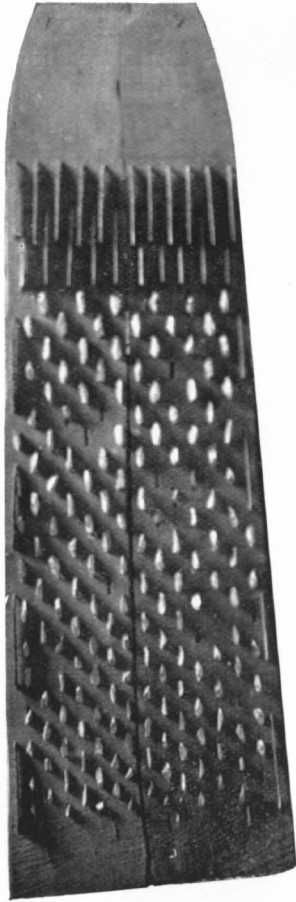


FIG. 6. THE TRIBULUM OR THRESHING SLEDGE. (Blackmore Museum.)

The Wheel of the Cart.—The wheels of the threshing cart were probably wood rollers in a frame armed with discs of iron. The tool was termed a 'hiltan' in Northern Syria, which, pressed down by the weight of the driver in a rude armchair, effectually cut up the straw. It was known to the Romans as the 'plostellum Phoenicum'—the Phoenician little wagon or cart (Evans).

The Threshing Sledge.—The sledge presents a broader threshing area than the wheel and is better than the treading-out of cattle, being cleaner and more under control. It not only forced out the corn, but cut the straw into chaff as well. It was a flat-bottomed sledge, five or six feet long and two or three broad, having an upturned front or brow. It was weighted with stones, or carried one or two persons, who stood, sat on a stool or seat, or lay upon it. A portion of its under surface was studded with chips of flint, or blocks of basalt, a cubic inch square, and protruding some inch-and-a-half. These were let into slits in the wetted wood, and contraction in the hot sun held them firmly in place. (Fig. 6.)

It was actuated usually by two bullocks united by a yoke, which was attached to the horns of the animals. The pole of the sledge passed through a ring fastened to the central and under aspect of the yoke, or the sledge was directly attached to the ring by chains or ropes. (Fig. 7.)

The sledge was found in Egypt and Palestine as the 'moreg' or 'mowrej'—the sharp threshing instrument having teeth. But the Roman term was the 'tribulum' (variety 'traha' or 'trahea') As Virgil says :



FIG. 7. THE THRESHING SLEDGE (EGYPT).

'Tribulaque, traheaque, et iniquo pondere rastri,'

which is wrongly translated by Ogleby—

'Sledges and flails, rakes ponderous enough.'

'The trahea or traha was a vehicle without wheels—properly a sled.'²

From the Roman threshing sledge, idealized into the sledge of fate, comes our present term 'tribulation.' The instrument itself has disappeared, but I sometimes wonder if the wooden 'clod-crusher' of our farms be not the modern representative of the Roman 'tribulum.' As a thresher, however suited to hot outdoor lands, it would not be very suitable for the Wall

² Prof. Bradley, 1725.

camp in our uncertain clime, which compels threshing to be done under cover in barns. And one does not wonder at the adoption of the 'flagellum' or flail, which the Romans seem to have met with in these islands.

In sunny Spain, where the Roman legions also found the flail, terming it there a 'malleus' (or mallet-like thing), the 'tribulum' still is found as the main threshing appliance. In the province of Murcia, for example, even the name of the flail ('mayal') is unknown, and the 'trilla' reigns alone. The older trillas had stone armatures, but the most modern Spanish forms have steel rollers set with steel cutters. In Portugal the 'trilla' is termed a 'trillo.'

The threshing sledge is thus found in the East, in North Africa, Madeira, Teneriffe, Spain, Portugal and in the Spanish colonies of South America.

In South America a stone roller is employed after the 'trilla' to crush out the last grains remaining in the ears. This 'trilla' is a flat board, armed with spikes or nails. Horses are also used, and in some parts the flail, which is there termed 'el latigo,' or the whip. The latter is thus described: 'Consiste el látigo en dostrozos de madera designales, de los que el más largo sirve de mango y el más corto de maza para golpear las espigas y producir el desgrane.'³

THE FLAIL.

As a rigid stick necessitates being on the knees, it was necessary in order to work in an upright position to employ a joint. Hence the probable invention of the flail, which goes back to the Christian era, being mentioned in Chinese books of that date, and being found in Britain by the Romans probably about the same time. The tool consists of two sticks joined

³ *Hojas Selectas*, Julio, 1906.

together, the striking stick acting as a long hammer head. It seems to have been an Irish, rather than an English, Pictish, or Roman implement. Reasons have been given for considering the 'bat' as being the Ancient English and Pictish implement (the 'tribulum' being that of the Romans), and the following evidence is offered in favour of the flail being of Irish extraction.

Its name in Old Irish is 'suist,' in Gaelic 'suist,' in the Isle of Man 'soost,' and in Wales 'ffust.' And as the Irish conquered and dominated these parts of Britain, it is probable that they carried the flail with them, and that its slightly varied name indicates a common origin in Ireland.

Had the flail been Roman, the Celts would have adopted probably a derivation of the Latin name. But though it was in the Roman period (55 B.C. to 400 A.D.) that the flail appeared, it was also in that period that the Irish invasions spread, to Gallogway and Scotland in A.D. 300 to 350, and to Wales, Devon and Cornwall in A.D. 366 to 405. By A.D. 500 the Scots (*i.e.*, the Irish) had reached the Orkneys and Shetlands. The Picts were then in possession of these islands, and were overcome by the Scots, but after a time the Picts again got the upper hand, till finally conquered by the Norwegians.

The Irish seem to have been a superior race, or in a higher state of civilization, than the Britons, Welsh or Picts. This is evidenced by their round towers, their writing on Ogham stones and their military achievements. And it is highly probable that they possessed the flail, and carried it with them, to thresh grain for their forces, for then, as now, an army marched on its stomach. That there was much cultivation of cereals in Ireland is evidenced by the large number of bronze sickles which have been found in Ireland as compared with Scotland.

Again, that the flail was Irish is confirmed by the Norwegians meeting with it in their Irish colonies (Dublin, etc.) in 789 and later, and by their adopting the Erse name of 'suist,' which they

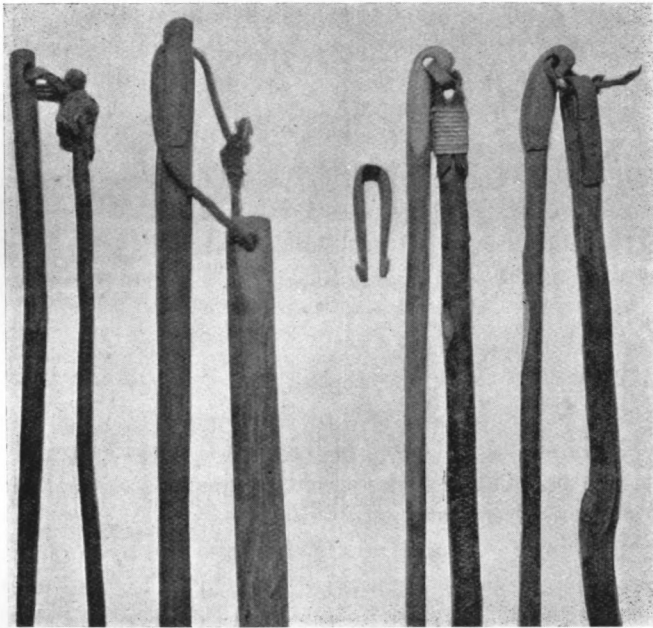
have reproduced as 'tust,' probably from 'an t'uiist'—*the flail*. Another Norwegian name, 'Tarske-stav,' the tasker's or slave's staff, seems to be also derived from the Irish word 'Tasg,' a task or slave. It may well be that the Norsemen set slaves or taskers to thresh for them with the indigenous tool of the conquered country.

That the flail was not Roman is also, I think, indicated by its being termed a 'flagellum,' *i.e.* a whip-like tool, in Britain; whilst they called it a mallet-like tool (or 'malleus') in Spain. In other words, it seems simultaneously to have been found in Britain and in Spain; and the legions in one country gave it one name and those in the other another. Had it been originally Roman it would, like the 'tribulum,' have had a common Latin name. Evans states that abundant flint flakes for shoeing 'tribula' exist on the sites of our Roman stations, showing that the 'tribulum' was in extensive use for some considerable period.

And it is probable that it was not till the Romans met the Irish (the Scots being an Irish race), about 300 to 400 A.D., that the flail came under their notice, when its obvious advantages in our uncertain clime would at once appeal to them. It may be they met a war flail in battle, such as the ancient Galloway flail, with its iron-jointed striker, which may have had some influence on the sacked forts of our Roman Wall. Or it may be they learned of the agricultural tool from prisoners.

Again, whilst the Spaniards have 'mayal,' from 'maleus,' as their Latin derived name, resembling ours of flail from flagellum, it is noteworthy that the Basques (the oldest people in Europe) have (like the Celts of Britain) their own native terms for the tool. The Basques term the flail 'id-aurra' or 'y-aurra,' and the striking stick 'chipitea.' And as 'id' is Irish and 'y' is Welsh for corn, a Celtic-Basque connexion, with respect to the flail, seems to be possible.

Northern Spain and Ireland have always had a close connexion, and this is enhanced by the flails in the two countries being identical. But as the Basques appear to use a Celtic form of name for the implement and as Ireland has more than one distinctive flail, whilst the Basques have but one, I do not think



A. B. C. D. E.

FIG. 8. THE CELTIC ZONE (I.) IN IRELAND AND GREAT BRITAIN.

- A. Irish flail with perforated handstaff. The progenitor of the Scotch, North of England and the Welsh flails. A 'suist.'
 B. Scotch flail, perforated handle and beater. From Shetland. A 'suist.'
 C. The wooden cap usually belonging to the Scottish beater before a leather cap was in use.
 D. North of England flail, perforated handle, leather cap on beater.
 E. Welsh flail or 'ffust,' with fixed perforated horn at top of handle.

it unfair (in the state of our present knowledge) to ascribe the origin of the European flails to Ireland. At any rate, it was

developed there, and spread to Wales, Scotland, and England, to Scandinavia, and probably to other parts of Europe. On the other hand, the tool may have come, with Ogham writing and other things, from Spain.

In reviewing the threshing tools in Britain during Roman times, I do not think it to be improbable that, say, about the year 350 A.D., along the line of Hadrian's Wall, the Romans might be using the 'tribulum,' the Picts the 'tresk-y-utria,' and the Scots the 'suist.' In other words, the three rival camps might thresh in three different ways, with the sledge, the bat and the flail.

Flail Zones.—The following parts of Europe may be mapped out into zones by their characteristic flails:

I.—Ireland, with Celtic Britain (the Highlands, Man, and Wales, the Hebrides and Shetland, but not Orkney), the Lowlands of Scotland, and the North of England down to the Tees, form one zone. (Fig. 8.)

The flails here are characterized by a *perforated handle* or handstaff.

II.—Ireland, and the Spanish Basque Provinces and Tuscany on the one hand, with Scandinavia and Denmark on the other, form another zone. (Fig. 9.)

The flails in these countries are characterized by being *simple swivels*, consisting of two grooved sticks and a dumb-bell tie. In Tuscany, the Basque Provinces and in County Clare the beating stick was longer than the handle. In the rest of the zone it was shorter. A few flails of this type also appear in Wales, and Orkney.

III.—The zone of Mid-England, and possibly Germany, Belgium, Holland and France. The German and other European flails, with names which arise from 'flagellum,' may have arisen from the British flail, *i.e.*, if the flail originated in Britain. That is, Germany and other countries must have got

their flail through the Romans, if the latter got it from us. In France, the Bretons may have carried it into Brittany and



A. B. C. D. E. F. G.

FIG. 9. IBERIAN-IRISH-SCANDINAVIAN ZONE (II.).

- A. Basque flail, beater longer than handle. A simple swivel.
- B. Italian flail (Tuscany). Do.
- C. Irish form, simple swivel, a *suist*. The progenitor of D to G and perhaps of A.
- D. Norwegian flail, practically identical with C. A *tust*.
- E. Norwegian flail, a simple swivel with perforated beater.
- F. Swedish flail, identical with the Irish and Norwegian forms.
- G. Swedish flail, a simple swivel with a peculiar lump at the end of the beater.

the Normans or Northmen into Normandy. The continental names derived from *flagellum* are given by Murray as the late

Old English 'figel,' a corruption of fegil, corresponding to Middle Dutch, Dutch and Low German 'vlegel,' Old High German 'fegel,' Middle High German 'vlegel,' Modern German 'fegel.' (Fig. 10, A, B.)

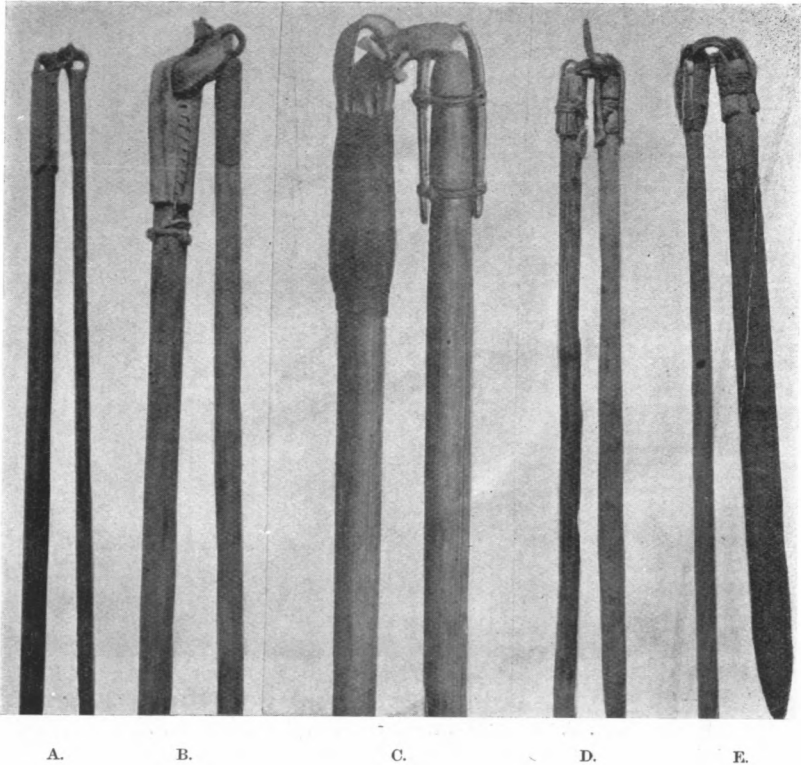


FIG. 10. ZONE (III) OF MID, AND (IV) OF SOUTHERN ENGLAND.

- A. From West Yorkshire (Leyburn), with iron staple and laced cap on beater. A characteristic form of Mid-England.
 B. From West Yorkshire, similar to 1, with laced cap and iron swivel.
 C. From Lincolnshire and Essex. Open wooden swivel on handle—a connecting form between zones III. and IV.
 D and E. From Somerset, with closed wooden swivels on handles. The characteristic flails of the South.

The above Mid-English and the modern German flails have alike a loop of wood or iron, and the Mid-English have an elaborately laced leather cap on the beater. Mid-English seem modified forms *via* Wales, of the 'capped' Irish variety.

IV.—South of England zone. Here the flails are distinguished by elaborate swivels of wood or horn on the handle. (Fig. 10, D, E.)

V.—The Far East zone (China, Corea and Japan). Here the flails are of wood with wooden arms, instead of a leather thong, Japan getting her flail from Corea and Corea almost certainly from China. (Figs. 14 to 18.)

FLAIL CLASSES.

Flails may be divided into the two classes of warlike weapons and agricultural implements, and a brief description of both may be of interest, as a complete catalogue would throw considerable complemental light on each other.

The War Flail.—The pre-historic 'flail-stones' are supposed by some to be the striking parts of a war flail. As D. Wilson says, 'Like the ruder flail-stone, the morning star, when efficiently wielded, must have been a ready weapon.'⁴ They are elongated pieces of stone, perforated at one end. The perforation is supposed to be for a thong, attaching the 'flail-stone' to a handle. Evans, however, is inclined to regard them rather as whetstones. He, however, thinks that the grooved stone balls and perhaps some of the perforated hammer stones may possibly have been weapons, resembling the bolas of the Pampas and Patagonians. The Esquimaux have a round, drilled stone, through which a thong is passed, to serve as a weapon.

Some war flails, such as the stone-headed weapon of the American Indians, may have come from the sling staff—a wooden

⁴ *Prehist. Annals of Scotland*, 190.

staff with leather thongs and a loop or pocket for the stone. It only needed to fix the stone in the loop to form a war flail. On the contrary, the Galloway war flail evidently came from the agricultural form.

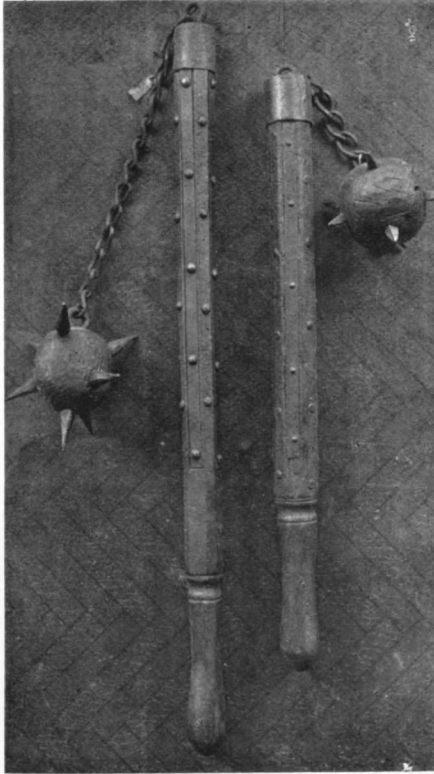


FIG. 11. MEDIEVAL WAR FLAILS.
In the collection of Mr. R. C. Clephan, F.S.A.

The Medieval War Flail.— This flail, known as the ‘morning-star,’ or ‘holy water sprinkler,’ consisted of a wooden staff, strengthened with iron when used in one hand, or of a longer staff of wood when used in both hands by the flail-men in battle. The offensive portion consisted of a ‘sand-bag,’ or of a pear-shaped or round ball of wood or iron, through which spikes were inserted. The spiked head was affixed to the staff by an iron chain. It is said to have been the favourite weapon of the Norman priest, who, objecting to the shedding of blood, had no scruple about the dashing out of brains, and striking downward from a horse, or by the long handle and flexible chain reaching a skull over

a shield, it must have been a terrible weapon, and would justify the old saying of ‘No fence to a flail.’ (Fig. 11.)

The Galloway Flail.—In Galloway a special war flail seems to have been in use. It had (like the agricultural form) a perforated wooden handstaff, through which went a thong to an iron striker jointed in two or three places. The jointed iron wrapping round the hapless form of the person struck at could break his ribs probably even when encased in armour and a single blow would shiver a sword into pieces. It may have been in use in Roman times to neutralize the broad sword and the pilum of the defenders of the Wall.

This flail is celebrated in old Galloway ballads, such as 'The Battle of Craighuider,' in which occurs the couplet:

'Wi' vengéful speed fierce Douglas flew
Where rang the swinging flail, man.'

Hef, the minstrel, and other old writers also speak of it.

American-Indian War Flail.—The North American tribes have an undoubted war flail. The Shoshones and Chippeways term it a 'pogamogon,' and the Mackenzie River Indians a 'pogamagan.' It is termed colloquially a 'cowie stick.' It consists of a handle, twenty-two inches long, of wood covered with leather, like a whip handle. At one end a thong, two inches long, is attached to a leather cover in which is enclosed a stone weighing two pounds weight. The other end of the handle has a loop for the wrist to secure the weapon.

Kalmucs, Mongols and Chinese.—These had a war flail with a perforated iron ball about two pounds weight attached to the end of the thong.

Japanese War Flail.—Perhaps the Japanese war flail (now obsolete) or 'kusari-gama,' from 'kusari' a chain and 'gama' a sickle, is as interesting as any. It is a combination of two agricultural implements, the flail and the sickle. It consisted of a sickle, having an iron chain attached to the end of the handle, the chain terminating in an iron ball. When in use the handle of the sickle was grasped in one hand and the chain in

the other. If attacked by a swordsman the ball and chain were thrown round the sword, its owner jerked forward, and the sickle used with deadly effect.

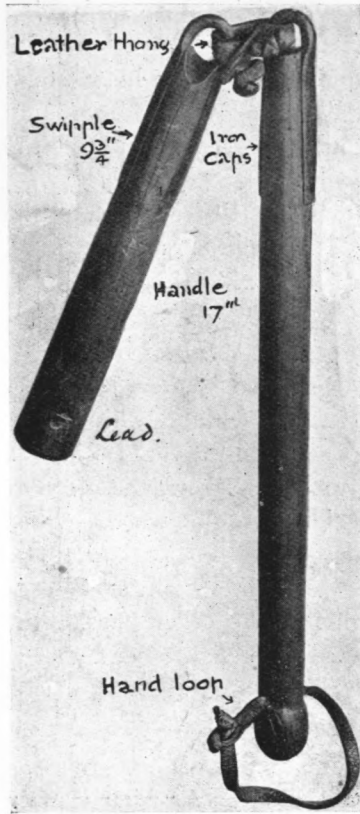


FIG. 12. 'PROTESTANT FLAIL'
(about $\frac{1}{4}$).
A pocket faction weapon. In Hull Museum.

The Protestant Flail.—This species of flail has given rise to much discussion, and I am venturing, with respect to it, to ask whether Lord Macaulay did not make an error as to its inventor, and Sir Walter Scott with respect to its proportions. Some have regarded it as a loaded club, after the style of a policeman's baton. Others regard it as a flail, similar in every way to the agricultural implement, but smaller, so as to be a pocket weapon. In the latter view I entirely agree, and I am fortunate enough to have obtained a photograph from a specimen in Hull museum, which places any doubt at rest. The only difference is that the striker is inset with lead, *i.e.*, it is loaded. (Fig. 12.)

It was carried at the time of the so-called 'Popish Plot' (1676-1681). In 1734 the *North-ern Examiner* mentions 'A certain pocket weapon called a Protestant flail.' Macaulay, in his *History of England* (vol. I, 4th ed. 1849), p. 264, says of its inventor, convicted at Oxford, and

executed, that 'the first victim was College, a noisy and violent demagogue of mean birth and education. He was by trade a joiner; and was celebrated as the inventor of the Protestant flail.'

Lord Macaulay therefore gives the credit of invention to College. But in *Notes and Queries*, 5th ser. XI, 53, is the following: 'Mr. Braddon (the inventor of the Protestant flail) was hanged for his principles, whatever they were, in 1681, at Oxford.' At page 3 of 'The Tryal of Laurence Braddon and Hugh George Jeffreys, Knight and Baronet. . . . London, 1684,' is the following, in the speech of Council for the Crown: 'And Mr. Braddon must of his own head, not being put on by any of the friends of the earl of Essex . . . but I say he, out of the true principle to manage the Protestant cause, as they call it, but indeed it was the Plot—he became the prosecutor of the business For you will find him value himself upon these titles: that he is the Prosecutor of the earl of Essex's murder: and the Inventor of the Protestant flail—an instrument, I suppose, gentlemen, you all have heard of.' I am hardly prepared to say who was the true and first inventor of this flail. But this particular invention seems to have shortened the life rather than enriched the pocket of more inventors than one.

Sir Walter Scott thus describes the Protestant flail in *Peveril of the Peak*: 'This was a sort of pocket-flail consisting of a piece of strong ash, about eighteen inches long, to which was attached a swinging-club of *lignum vite*, nearly twice as long as the handle, but jointed so as to be easily folded up. This instrument, which bore at the time the singular name of the Protestant flail, might be concealed under the coat, until circumstances demanded its public appearance.' In a note Sir Walter quotes Roger North's description of the same instrument, which I am inclined to regard as more correct than that of Sir Walter himself; Scott probably mistaking the meaning of the word jointed. North's description is: 'A certain pocket weapon called

a Protestant flail. It was for street and crowd work, and the instrument lurking *perdue* in a coat pocket . . . it might . . . carry an election by a choice way of *polling*, called knocking down. The handle resembled a farrier's blood stick, and the 'fall' was jointed to the end by a strong nervous ligature that in its swing fell short of the hand, and was made of *lignum vitæ*, or rather, as the poet terms it, *mortis*.'

The poet referred to is Alexander Radcliffe (*Poems*, 1682), his lines being :

' In former days th' Invention was of wracks,
To dislocate men's Joints, and break their Backs,
But this Protestant Flail of a sterner sort is,
For Lignum Vitæ here proves—Lignum mortis.'

The Protestant flail is also referred to in Wright's *History of the Embassy of Lord Castlemaine from James II. to the Holy See*. In *Museum Britannicus*, by J. and A. Van Rymdyk (London, 1778), it is also engraved, and has a very pompous description.

Perhaps we might mention as a contrast 'The Roundhead'—a weapon figured and described in *Mercurius Civicus* of 1643, No. II. This was a spiked-headed staff, a morning star without a chain, 'which the Papists call round-heads, for that with them they intend to bring the Roundheads into subjection.'

The Poacher's Flail or Swingel.—This flail was essentially the same as the Protestant flail. It was carried by poachers, watchers, gamekeepers, etc. A watcher is said to have been killed at Felton by a poacher's flail. Sometimes the poachers employed the ordinary agricultural implement, which made a nasty weapon on a dark night. Sometimes they took the souples or beating part of the flail only on their midnight errands.

As Gilpin has it in *Popular Poetry* (1875), 108, 'A lang flail souple fulfilled his neif.'

In Hants, 'The foresters had fierce fights with the coast-guards, defending their ill-gotten booty with swingels.'—Heath's *Eng. Peas.* (1893), p. 135.

'The poachers armed themselves with swingels, a species of flail, a weapon of terrible effect in the open.'—*Cornhill Mag.* (Oct. 1892), 377.

'The deer-stealers had also a formidable hand weapon, a kind of bludgeon, called a "swindgell," like a short threshing flail, the striking arm of which was made of iron.'—*Wilt. Arch. Mag.* xxii, 165.

The Carpet Flail.—This is made of two sticks of bamboo, joined together with interlinked leather thongs, and it is employed in Glasgow warehouses to beat or dust carpets at the present time.

The Agricultural Flail.—As most of the British varieties of the agricultural flail have been described in *Archæologia Aeliana* (3rd ser. II), I need hardly describe them again. But I might say that I have been fortunate in obtaining information as to Swedish flails from Mrs. Fielding of Stockholm, and of the far east forms from Mr. Kumagusu Minakatas of Japan. And I would venture to ask that these most interesting letters might be printed by the society, and thus be allowed to speak for themselves.

Generally speaking, agricultural flails fall into two classes: (1) with direct action from the rigid wooden connexion, like the Asiatic flails, and (2) swivels and semi-swivels like the European flails, from having a more or less restricted, but always flexible, hinge connexion. The parts of a European flail are the handle, the beater, the cap or caps on the beater or handle, and the thong; and as the names of the implement and its various parts have influenced British literature perhaps more than is generally thought, I am giving a few of the more common ones as follows:—

1. Celtic: Suist (Erse), suist (Gaelic), soost (Man), ffust (Wales).
2. Basque: Idaurra, Idarbur, Chipitea,

3. Roman: Flagellum (in Britain), maleus (in Spain).
4. British (from *flagellum*): Flail, or fizel, flezzle, feil, faill, fleyel, flayelle, flay(e), fael, faile, feale, feyle, flay, flail. Derivation from the late Old English *figel*, a corruption of *fegil* (Murray). Frail: This is exceedingly common throughout England and Scotland; vraal (Berks.), yrail (I.W. and Wilts.), (Wright) being varieties. In Northumberland it is pronounced 'thrail' at Warkworth and Rothbury, etc., and 'el frail' in Brittany. Other names: I have heard these other names given to the tool—the *sticks* in Durham and Northumberland, and the *bag-pipes* in Yorks. Burns also gives *flinging-tree*.
- 5.—Anglo-Saxon: Perscel=therscel. Hence comes threshel (Lancs.), threshet (Notts., Leic., Nhp., Oxf., Brks., Suf., Essex, Kent, Sus.). (Wright, *Dialect Dictionary*.) Drashall (Dev.), and thrashall (Hants), are also derived from perscel.

The handle was, in Celtic, collop or collopon (Erse), lorg, lachran (Gaelic), lorg, luirg (Man), gwialen, gwial (Welsh), lur (Cornish). In England it was almost universally handstaff. Staff (Kent) and handstick (old) are rare, whilst haft (Scotland) is common.

The beater was often spoken of as the flail or frail. In Celtic it was buailtain, booltan, boolshan, booltheim, boulsham (Erse). The last four are how I have heard Irishmen pronounce it. Buailtain (Gaelic); gwial-ffust, gwailen-ffust (Welsh). In England it is the threshing-stick, swingle-tree, swinging-tree, flail (Dev., Som.), swingel (Kent), swingle (Cumb.), beater (Hants), souple, soople (Northb.), and swipple, swoople, etc. (Yorks.) In Scotland it was generally a soople, with threshing-tree in Perthshire.

The cap on the beater: In Celtic, carbine (Monaghan), poukon

(Donegal). In Ireland, caps; in Scotland, hats; and in England, cap generally, but capping (Cumb.), heudin (Northb.), cabal and capel (Dev.)

The thong: In Celtic, midulee (Monaghan); iall (W. Hebrides); in England, thong generally, but couplin (Northb.), flail-hinging (Cum., West.), tie (Hants), middle-bind (Dev.)

SCANDINAVIAN AGRICULTURAL FLAILS.

(Those of Norway, Sweden, and Denmark.)

These flails are closely allied to those of Ireland and it was probably in Ireland that the Norwegians derived their earliest knowledge of the implement, *i.e.*, during their occupation of Dublin and other colonies on the Irish coast (A.D. 795, and later). It is possible that the flails of Sweden and Denmark were derived from Norway, as the forms and names are similar. The three countries were closely connected, being at times under one ruler, as in the time of Canute, who also ruled England as well. But in any case the relationships of the flails of Scandinavia and Britain are close ones, and some of their terms have become grafted upon parts of the flail which, as a whole, carries a Roman name (*flagellum*), but which had also an older title (*suist*) and a pre-Caesarian existence among the Celts.

Taking the four Norwegian names for the flail, we find them to be as follows:—

1. 'Tust' (thust): This name is derived from the old Erse or Irish word 'suist,' which, with the tool, and other Irish words and agricultural improvements, were carried back into Norway, where they still linger. Such other words are 'cru,' meaning 'a cattle enclosure,' and 'saan,' an oven to dry corn.
2. 'Tarsker-stav': The thresher, tasker, or slave stick, which points to the Norwegians setting the Irish, Manx

and Britons to thresh (with the indigenous tool—the flail) the corn of the conquered country. In the Isle of Man we have ‘bwoailleyder,’ and also ‘taster’ for thresher, tasker, or slave. In Erse the same thing occurs. The term tasker for the thrasher also still lingers in the South of England.

3. ‘Pleil’ (plael): This is closely akin to our old English word flael, and was probably derived from it.

The ‘pleil’ of Norway, is the ‘plagel’ of Sweden, and the ‘plejl’ of Denmark—all very similar, and all tending to show that their flails were derived originally from Britain, probably *via* Norway. The Scandinavian flail forms are also, with unimportant local differences, almost identical and strikingly like the swivelled Irish form. (Fig. 9.)

4. The last Norwegian name is ‘slogi’: This appears to be a native or Norse term proper. Thus ‘slogi’ (flail), ‘skaft’ (handle), and ‘slag’ (beater), in Norway are reproduced in Sweden by ‘slaga’ (flail), ‘skaft’ (handle), and ‘slagbult’ or ‘slagval’ for the beater. Whilst in Denmark we have ‘plejl’ for flail, ‘handval’ or ‘handstok’ for handle, and ‘slagl’ for beater. Hence there is a very close connexion between the terms used to denote the flail and its parts in these three northern countries.

It is curious to note how the Latin name flail, from *flagellum*, has been retained, and how we have adopted the Norse or Scandinavian term for the handle (hand-staff), whilst we stick to the Latin name again for the beating stick, viz., ‘souple’ from *supplex*, bending the knee; whilst ‘swipple,’ another name for the souple, may come from O. Norse ‘svipull,’ shifty. The local use of ‘frail’ for flail, which has spread to Brittany as ‘el frail,’ is paralleled by the Swedish ‘plagel’ and ‘pragel.’

Another northern country, Finland, terms its flail 'puida,' whilst its beater is 'vassta,' 'ruisa' or 'ruiska.' These are not akin to the Scandinavian names, and may perhaps have eastern or Russian affinities.

The Scandinavian flails may best be described as simple swivels—the commonest form (found in Norway, Sweden, and Denmark) consisting (like the Irish Achil form) of two grooved sticks and a dumb-bell tie. The only difference is that the top of the beating stick of Norway and Sweden is round, whilst that of Denmark is square. Then the next form, common to both Norway and Sweden, is a simple swivel, *i.e.*, the handle has a groove in it, but the beating stick is perforated to receive the other end of the thong. In Sweden (Westergötland) there is a swivelled handle, having a groove in it, but the beater has this peculiarity, that it possesses a lump or block at the free extremity, termed locally a 'drop' or 'bult.' The whole of the Scandinavian flails are therefore simple swivels. I have been very fortunate in receiving, through the kindness of Mrs. Fielding of Stockholm, a translated report from Herr Theodore Winborg on Swedish flails and also one from Herr E. Hammarstedt, the curator of the Nordiska Museum, Stockholm, which are given below. The former writes:

I hope that the photographs and the description I have succeeded in obtaining from Skansen⁵ will throw more light upon the subject than if I had had procured and sent an old flail, as I first thought of doing. Amongst the photographs is one from Westergötland, my native district, differing somewhat, however, from those I remember. The 'prägel,' pronounced 'präjeln' in Westergötland dialect, is a young shoot of ash taken up by the root, which forms the enlargement at the end, called 'bulten' [an illustration is given in original letter], almost like the battle club of the ancients. The handle is of hazel (*skaflet*). The attachment between the handle and the 'prägel' is a strip of untanned neat's hide, which is twisted in such a manner that it looks like a rope.

⁵ *Skansen* is a place in Stockholm where there are extensive collections of ancient northern implements.

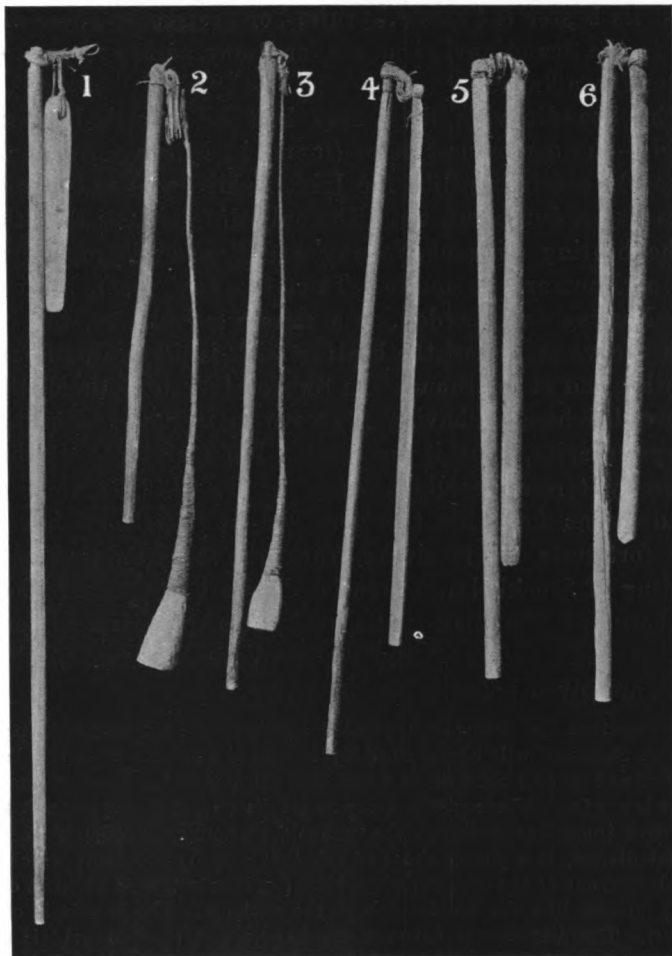


FIG. 13. SWEDISH FLAILS.

1. North Sweden (like a Norwegian form).
- 2, 3. Middle Sweden.
- 4, 5, 6. South Swedish (and general) types. Resemble the flails of Norway and Denmark.

Herr Hammarstedt writes :

The implements or flails for threshing by hand are called in the northern, middle and also in many parts of southern Sweden, 'slaga,' 'slögn,' 'sloga,' 'slogn,' 'slugn,' etc. In southern Sweden it is often called 'plägel,' 'plägel' (pronounced 'ploegel'); 'präjel' and 'prygel' (Bohuslan); 'prägel' (Dalsland Westergötland); 'premmel' (Westergötland); 'präl' (Halland). The stick which the thresher holds in his hand is called 'skaft,' 'val' or 'handval.' The other part, which is attached to the 'skaft,' and with which the corn is beaten, is called 'slagbult,' 'slagklubb,' 'slagval' or 'dunt' (this last in Wärrmland). The 'slagbult' is attached to the 'skaft' by means of a strap, frequently made of eel-skin, otherwise of leather, which in Westerbotten is called 'slaga lyr'; in Uppland, 'slag-tåg' (rope) or 'slagrem' (strap). In the more southerly parts of Sweden, 'pläja hälla' or 'präjel kurra' (Dalsland, Westergötland, Bohuslan); 'präla kurra' (Halland). In the accompanying photographs, 4, 5, 6, represent the south Swedish types, which, however, with more or less variation are found also in middle Sweden (*i.e.*, north Dalarna) and farther north; 2, 3, represent the normal types of middle Sweden, such as are found in Uppland, Södermanland, Wästmanland, Dalarna, etc.; 1, shows a Norrland type. The handle in 1, is 1.66 m. long, and the 'slagbult' is 0.41 m. long. Types 4, 5, 6, have a groove both in the 'skaft' and 'slagval' at the upper end, in which groove the strap runs. In types 2, 3, on the contrary, only the 'skaft' is provided with such a groove; this is also the case with type 1, in which latter the 'slagbult' is bored through—a feature which is also found in lower Dalarna. Types 2, 3, the 'slagval's' upper end is attached by small straps to a thicker strap which runs round the end of the 'skaft.' The 'slagval' in this type is much smaller (made of the roots of mountain ash) and at the end is furnished with a somewhat conical lump attached by means of a tarred thread.' (Fig. 13.)

JAPANESE AGRICULTURAL FLAIL.

The Japanese agricultural flail or 'nawasiro' differs as in other countries in different parts of the islands, and bears different names. A photograph shows it to be all of wood, with a longer bamboo handle than the beater, in one part of the country, the contrary being the case in other parts of the empire. But everywhere it seems to differ from our forms by having a rigid wooden arm (connecting the 'ye' or handle to the beater) instead of our flexible thong of hide or leather, and a direct action would therefore seem to be alone possible.

I have received the following instructive letter on the subject from Mr. Kumagusu Minakatas of Tanabe, Kii, Japan, for which I feel greatly obliged, as it links up the Japanese, the Corean, and Chinese forms, and conveys most interesting information on the flails of the Far East, in a way that would be quite impossible to obtain except from one so cultured and so courteous as my correspondent. The letter is as follows:—

TANABE, KII, JAPAN, Sept. 30th, 1907.

Dr. T. M. Allison, Newcastle-on-Tyne.

Dear Sir, Your letter bearing date of 16 July last was received on the 21st ult. The subject you question me about is quite out of the ken of my knowledge; yet my sympathy with your eagerness after knowledge impels me to send this reply—which I have taken some pains to gather out of several books within my reach, and from the mouths of reliable country folks, who also have shown me the object in question, as well as the *modus operandi* with them—thus my excuse for having delayed so long in dispatching the present epistle.

Flail is called in Japanese 'karasao,' composed of 'kara' (Corea) and 'sao' (rod), so its meaning is 'Corean rod.' This etymon indicates the implement to have been an introduction, as is also the case with the harrow, *Japonice* 'kara-guki' (Corean spade). The name 'karasao' for the flail appears to have already existed in the 10th century.

The Coreans, in their turn, seem to have learnt to make the flail from China, where it is called by several names, viz., 木口 'kia,' the letter representing it being composite of 木 'muh' (wood), and 口 'kia' (to add). So it signifies that the implement is constructed by adding wooden staff to another wooden staff. Modernly it is called 'lien-kia,' 連木口, or joined flail. According to Liu Hi's *Shi-ming*, or *Explanation of Names* (1st, 2nd century A.D.), 'kia' (flail) means 'to add,' because people make it by adding (a wooden piece) to the head of a handle, for beating the spikes, and exposing the grain. In Yang Hiung's *Fang-yen*, or *Local Speeches* (he lived B.C. 53 to A.D. 18), the flail is given with the following local names, viz.:

食 Tsi'en; 權父 Shieh-pui; 梛 Pau; 拂 505
 秧 Yang; 桴 Puh.

This diversity of its local names bears witness to the wide distribution and use of the implement in China at the Christian era. Wang-ki's *San-chai-tu-hwui*,

or *Illustrated Encyclopædia of the Three Systems* (1607), says: 'To form a flail, join together 4 wooden sticks with leather thongs, so that the whole measures 3 feet long and 4 inches broad' (see fig. 14). Another form is made with a single rod instead of 4 (fig. 15). In either case the sticks joined together, or the single rod, is made to turn on an axis, which is inserted towards the end of a long wooden handle.

In Japan, at least in this part, I find only one form generally in use, for which see fig. 16 on following page.

CHINESE FLAIL.

Fig. 14. *b*, the handle here is longer than *a* the beater.

Fig. 15. In this flail *a* appears to be the handle, and *b* the (longer) beater, just as in the Japanese flail.

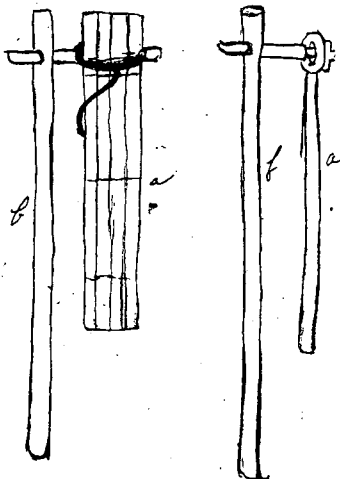


FIG. 14.

FIG. 15.

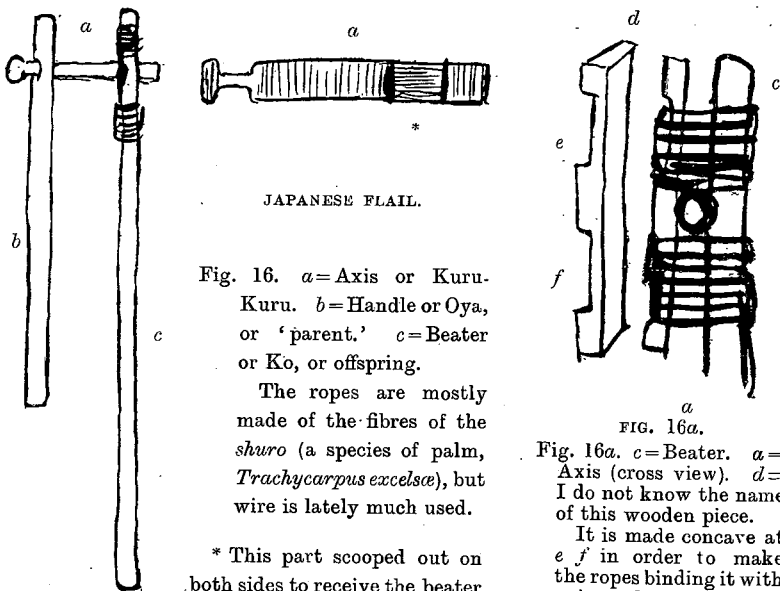
Contrary to the Chinese flail (fig. 14), the Japanese one (fig. 16), has its handle shorter than the beater, but I learn that, should the workman be of small stature, the longer the handle the better. As for the wood used for the flail, the handle can be made of any wood; the axis of the 'kashi' (several species of *Quercus*), or the 'Erst' (a tree belonging to *Cupuliferae*); and the beater of the *Camellia Japonica*, 'tsubaki' (*Pasania cuspidata*), or the 'sakaki' (*Cleyera ochracea*). The axis needs a wood of hard, solid, unbreakable nature, whilst the beater needs to be a quite straight staff.

Another form (fig. 17) has the handle of bamboo, whose upper tip is slit into half, and after being softened with fire, is bent over till the upper edge closes on the lower, and then it is tied tightly with a rope.

Besides, I learn there is a new form (fig. 18), but recently patented, for

sale. I have never yet seen it, but from what my informant says, it appears to be something as is here figured. Opinions vary as to its efficaciousness when compared with the usual forms above noted.

Other two names for the flail, apparently of later growth, are given in Ootsuki's *Genkai*, or *Sea of Words*, a very popular dictionary in use now, viz., 'kururibō' (turning rod) and 'maigine' (turning pestle).



JAPANESE FLAIL.

Fig. 16. *a* = Axis or Kuru-Kuru. *b* = Handle or Oya, or 'parent.' *c* = Beater or Ko, or offspring.

The ropes are mostly made of the fibres of the *shuro* (a species of palm, *Trachycarpus excelsa*), but wire is lately much used.

* This part scooped out on both sides to receive the beater and the wooden piece, *e f*.

FIG. 16.

FIG. 16*a*.

Fig. 16*a*. *c* = Beater. *a* = Axis (cross view). *d* = I do not know the name of this wooden piece.

It is made concave at *e f* in order to make the ropes binding it with axis and beater tight enough.

In other parts, rice is not threshed with the flail, but a large grinding mill is used for it instead. The chief objects for which the flail is used are wheat, the various kinds of pulses, and the *Polygonum tinctorum* (Lour). The latter is an herb whence a sort of indigo is obtained; for separating the leaves (the parts necessary for manufacture) from the stems (the unnecessary parts) the flail is used.

This reply I know is very imperfect, owing to my unacquaintance with the subject. Withal, the above statements contain nothing unsound, for I have made every possible inquiry about it before writing this. Meanwhile, if you will favour me with a copy of your paper on the flail, I shall be much beholden, and may add some more information concerning it. I have been in London for

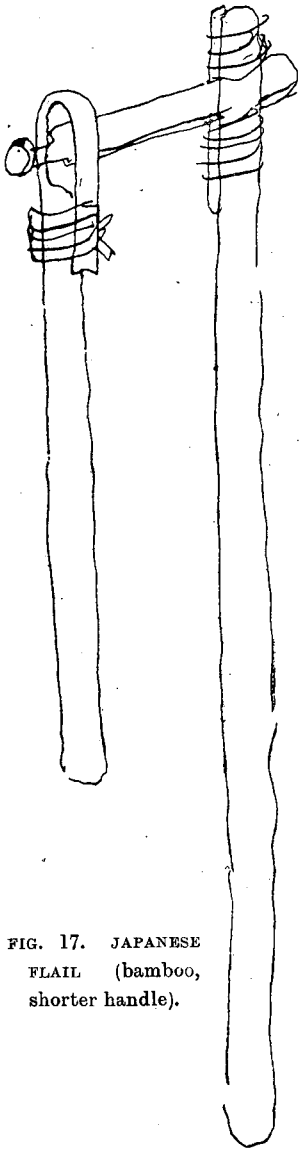


FIG. 17. JAPANESE
FLAIL (bamboo,
shorter handle).

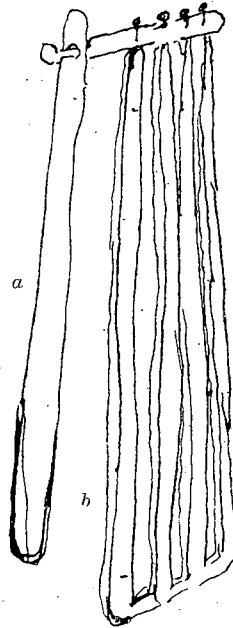


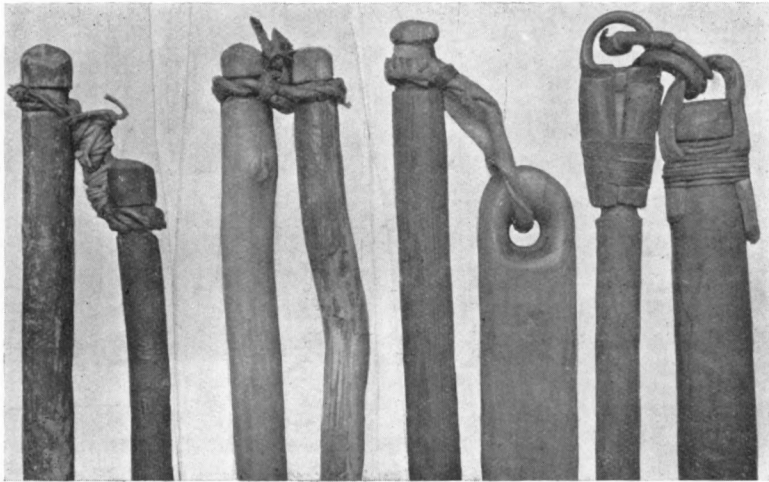
FIG. 18. JAPANESE FLAIL,
recently patented.

- a* Handle.
- b* Three or four iron strips,
thin and moderately broad.
They are connected in
front by a transverse iron
piece of a similar nature.

nine years, and have spent there much pleasant days in reading; but now that I am in this small town, far from the centres of learning, for the last seven years since my returning home, my old acquirements have faded away, and my power of writing English has greatly diminished—so, I beg you to read this reply with every possible allowance, and guess to hit at what really I mean and want to express.—Yours very faithfully, KUMAGUSU MINAKATAS.

FLAIL MIGRATION IN THE BRITISH ISLES.

If the migrations of the flail could be correctly diagnosed, they might perhaps throw some light on early tribal movements



A.

B.

C.

D.

FIG. 19. FLAIL MIGRATION.

A. Irish simple swivel (a 'suist').

B., C. Norwegian (a 'tust'), Swedish, Danish.

D. South of England. Perhaps from Scandinavia by adding a cap to the simple swivel, or more probably by way of Wales and Mid England, as per figs. 10 and 20.

in Britain, and if the implement be Celtic and Irish its distribution seems to show that Irish migrations took place towards the Highlands and towards Wales, *i.e.* eastward rather than westward—the reverse of the usual rule. The tool tends to confirm

the tradition of Irish raids into the Highlands and North Wales, and into South Wales, and perhaps also into Devon.

Irish and Welsh Flails.—The Irish forms are three, viz.:—
 (1) *A simple swivel* (fig. 19, A), akin to the Spanish, and found in the Isle of Man and Scandinavia. It is not found, so far as I know, elsewhere in the British Isles, except rarely in Wales.
 (2) *The perforated handled form* (fig. 20, A). This apparently accompanied the Highlanders or Scots, and spread over Scotland

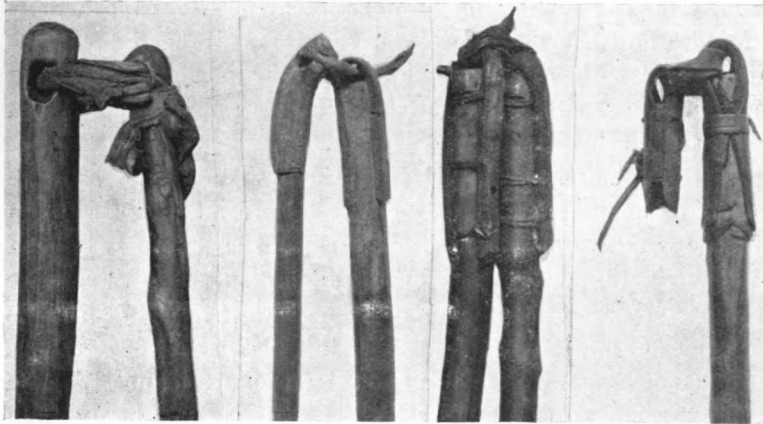


FIG. 20. FLAIL MIGRATION.

A. Irish (perforated handle).
 B. Welsh (perforated fixed horn).

C. Irish (two fixed caps).
 D. Devonshire (revolving horn and fixed cap).

and England, down to the Tees. It is found in North Wales (fig. 20, B), and has a perforated fixed sheep's horn on the handle. This horn may have become (by a compromise between it and the next variety) the revolving horn of Devonshire (fig. 20, D).
 (3) *The 'capped' flail*, in which both sticks are capped first with wood [in Ireland, Wales, and the Highlands (fig. 8, c)], and then with leather (fig. 20, c). This form is found in Monaghan (eastern Ireland), and is the common form of South Wales.

The only difference is that the Irish has three, and the Welsh two sutures, running in as many grooves, as fasteners. The leather capped flail of Wales (in living memory) became the present flail of Mid-England, which has an iron cap (fig. 10, A), on the handle and a leather cap on the beater (or 'swipple,' the name both in Pembroke and Yorkshire). Again, as the wooden Welsh cap of 'gwial,' or 'gwail' (*i.e.* flexible wood) is occasionally found in South Wales, and as an open revolving cap of wood (fig. 10, c) is found in Lincolnshire and Essex, it is probable that the latter is the connecting form between the iron capped flails of Middle and the closed wooden caps or swivels of Southern England. In other words, Ireland gave the flail to Scotland and the North of England, and (through Wales) to Middle and Southern Britain.

In a former paper* I said the Mid-England flails resemble those of Germany, and the latter may have come eastward from Britain by means of Roman intercourse. The simple swivels of Scandinavia (fig. 19, B and c) might, by adding a cap, have been the forbears of the swivels of the south (fig. 19, D), but the above lines of migration seem now, I think, much more probable.

The Welsh name for flail is 'ffust,' pronounced 'fheest.' This may have come from the Irish 'suiste,' but is more likely from the Latin *fustis*, a stick, the Romans overrunning Wales, and leaving many traces on the language. The Latins thus gave the names *flagellum* in England, *fustis* in Wales, and *malleus* in Spain. And as I think there is no special claim made to a Spanish-Welsh connexion, and as Ireland and Spain were in close touch in early times, and the former might get the tool from the latter, I think it more probable that Ireland gave the flail to Wales than *vice versa*. On the other hand, 'ffust' may be from 'suiste,' the Irish term. But the latter is pronounced 'soos-tah,'

* *Arch. Ael.* 3 ser. II.

which is a long way from 'fheast.' Hence the Irish Celts, like the Basques, have kept their own name for the tool, and this seems to point to Ireland having the implement before England or Wales, or else Ireland would have had a modified Latin name from one or the other of these countries. A Welsh term is also used in North Pembrokeshire for the beater, viz., 'ial-ffust,' which as 'iall' (thong) is in use in the Hebrides, and this word is of Irish and not Welsh extraction.

The following information on Welsh flails has been given me by Mr. W. Eardley, Newcastle; Mr. G. Owen Williams, St. Davids, and other kind correspondents. The former was good enough to obtain an example of the old perforated variety from Bala, which is surmounted by a fixed perforated sheep's horn, and has the following history: 'It is seventy years old, and was used by Robert Brynifan, who worked (like other threshers) for 4d. a day. About 1855 the threshers obtained 6d. a day, but Robert continued to thresh for the 4d. and obtained in consequence the name of "Fourpenny Bob."' The 'capped' flail was the commonest form in Pembrokeshire, and was swung round and behind the thresher's head, whilst the simple swivel (of which few were in use) had a more direct action.

In Pembroke the threshers as wages took one-twentieth in kind, the average threshed per man per day being $7\frac{1}{2}$ bushels. As a rule a thresher could swing the flail both ways. The threshing-plank was made of stout strong oak boards, nailed on cross pieces. It was seven feet long, by four to five feet in breadth, and was placed in a sloping position. The first thing was to place the head of a sheaf on the threshing-plank. Threshing commenced on this part of the corn and was termed 'gloigo' or 'cloigo.' The band of the sheaf was next loosened, and the heads threshed for two or three minutes. This was called 'tori' or breaking. Next the sheaf was turned ('troi') with the helve (handle) and foot. The swing of the flail being now reversed,

'dwrnu mewn' or threshing inward commenced. Then the flail was reversed and threshing outward 'dwrnu mas' ended the process, leaving the straw to be collected. The thresher or 'dyrnwr' could thus skilfully move the straw all in one direction till all was spread out, and then bring it back again, without using the hands, so as to thoroughly beat out the under part of the sheaf. Slow time (day work) was 20 strokes per minute, fast (piece) time was 60 strokes. The following rime tells its own tale of there being tricks in all trades, including threshing :

Hugh the thresher learned a trick,
By threshing hard, he broke the stick.

WELSH TERMS.

The following Welsh terms have been kindly given me by Messrs. Eardley, W. G. Williams, and G. Owen Williams :

English.	Local.	Welsh.
Flail ...	... Flail (Bala)	... Ffust (General) - ffusto, to bang
Handle ...	... Flail-handle (Bala)	Troed-ffust (Carnarvon, N. Pemb.)
	Helve (So. Pemb.) ...	Troed-lath (Bala)
		Stual (Anglesea)
		(Troed = foot, or short handle)
		? Gwlen-ffust (Carnarvon)
		(Gwial, Gwialen = flexible stick)
Beater (swipple in Yorks.)	Swipple (So. Pemb.)	? Gwialen-ffust (Dictionary)
		Lleu-ffust (Bala)
		Blaen ffust (Carnarvon)
		Ial-ffust (N. Pemb.)
Cap ...	... Heelpiece (Bala) ...	Tep or Tap (Bala)
	Capping (So. Pemb.)	Tepyn or tricyn (N. Pemb.)
		Pingurch (Carnarvon)
Thong ...	... Middle-band (So. Pemb.)	Cuplus, cupplus-ffust, croi (N. Pemb.)
		Carra or carrai (Carnarvon)
Thresher ...	...	Dyrnwr (N. Pemb.)
Threshing ...	...	Dyrnu (N. Pemb.)
Threshing-floor ...	...	Llawr-dyrnu (N. Pemb.)
Hand threshing-bat	...	Gorthwyn (N. Pemb.)
Humeller ...	...	Collier (Col = awns, ier = instrument)

KINDRED TOOLS.

It is hardly necessary to go into the history of the threshing-machine invented or perfected by Meikle of Dunbar in 1785. But interesting accounts of its invention and of its introduction into Northumberland are to be found in a *General View of the Agriculture of the County of Northumberland*, by Bailey and Culley (1805). The earliest attempt at machinery seems to have been the attaching of a number of flails to a revolving cylinder, but applied in this way the force broke the beaters and the attempt failed. Of the steam thresher it need only be said to be still with us. But in the case of barley there were one or two implements very closely connected with the flail, *i.e.* with the process of threshing, *viz.*, the humeller of Northumberland and the creeing-trough of the same county. The former was a grate of iron with a central handle and the awns were removed by 'possing' the thinly-spread barley with the tool. It was commonly termed a faltering-iron :

'Tak that foeterin-iran, an foetre while neean.'

Spec. Dial. (1885) III. 14.

It was also a 'collier' in Wales, 'foutering-iron' in Yorkshire, 'piling-iron' (Tamworth), 'piler' or 'peeler' (Shropshire), 'haulmer' or 'chopper' (Norfolk), 'chumper' (Dorset), and 'barley-chumper' or 'siler' in Hampshire. These names testify to its widest distribution.

The creeing-trough of Northumberland was a stone mortar, in which the pellicle of barley was removed by a pestle. There is a large collection of creeing-troughs at the Castle of New-castle. In Scotland, the creeing-trough was termed a 'knocking-stane,' a wooden mallet being used to knock the pellicle off the barley when the grain was placed in the stone mortar. The processes of threshing and humelling, and of getting rid of the pellicle are now all effected by the steam thresher, which seems to mark the *ultima Thule* of threshing operations.

THE FLAIL IN BRITISH LITERATURE.

I have been fortunate in having friends who have brought many references regarding the flail to my notice. The honorary secretaries and several members of our society have kindly sent me much information. Mr. Edw. Peacock, F.S.A. of Kirton-in-Lindsey, has sent me several flail specimens and much valuable information, as have several others. I am obliged to Mr. Graham for interesting Celtic references, and Mr. R. W. Sisson in his all too brief life took a kindly interest in the subject and his notes serve as reminders of one of the sweetest and bravest characters I have yet had the fortune to meet.

The following quotations will show how the flail has influenced British literature, though not only the tool, but its very name, is now almost obsolete, at any rate in towns. I have had some curious answers to the question—what is a flail? The answers have varied from ‘a game bird,’ ‘a musical instrument,’ to the vague but very safe assertion—‘something in the Bible.’ The implement has, however, played a part in history, and that it has strongly influenced literature the following will tend to show: Cowper, Carlisle, Swift, Spencer, and P. Fletcher all refer to it. Macaulay and Scott mention the Protestant flail, and Lord Palmerston, in the *Telegraph* of 16 Dec., 1864, speaks of the machinery riots among the flail-men.

In the *Rise of the Dutch Republic* (III, 492), is the following concerning the Spanish night attack on the Island of Schomden: ‘The Zelanders, however, did not assail them with fire-arms alone. They transfixd some with their fatal harpoons; they dragged others from the path with boat hooks; they beat out the brains of others with heavy flails.’

In Celtic literature appears this bit of old-time folk lore:

‘To sweep the stack oft-times did I repair,
My nails and hair being left beneath the embers,

The flail in the gable corner oft I placéd,
 (Do cuirinn an t'suist faoi cùl na gaible)
 And the spade beneath my pillow silently.'

—B. MERRYMAN, 'Midnight Court,' *Gaelic Journal*, Nov. 1, 1882.

The following appears as a smith's song in an Irish grammar. I venture to regard it as a threshing song, as smiths do not strike together, nor in a round. But in Celtic Brittany the threshers work in two rows, striking together although alternately, or in a round or circle, striking one after the other, and keeping wonderful time. Buailleain also signifies to thresh as well as to strike.

' Buailleain arise e	Let us strike it again,
A's buailaein le ceile	And let us strike it together,
'S buailamid cuiairt air	And let us strike all in a round,
Go luat a's go h-ea's guid.'	Both quickly and smartly.

In Scottish literature there appears a confirmation of the Northumberland word 'berrying' for threshing with the flail, which is used in the western parts of the county, thus:

I'll sheel a' your sheep, in the morning sune,
 I'll berry your crap (crop) by the licht o' the mune,
 And ba' the bairns wi' an unkend tune,
 If ye'll keep puir Aitken Drum.'

—*Aitken Drum*, by NICHOLSON.

Nicholson also refers to the flail in the same poem thus:

' Rab's lingle brak as he meant the flail,
 At the sight of Aitken Drum.' (Lingle=thong.)

Then again there is:

'The chief (brownie) he did see, o' the swinging-tree
 In ane strange auld chaumer there.'

—MACTAGGART, *Encycl.*, 1824.

In Scott there are several references. Thus in the *Bethrothed*, c. xv, a lady who had spent the night on a hard and comfortless bed, says: 'Methinks my limbs feel as if I had been under all the flails of a franklin's yard.'

In an introduction to the *Songs of Scotland*, p. 33, there appears:

' Ane blanket, and ane wecht, also
 Ane shule, ane sheit, and ane lang flail;
 Ane ark, ane almry, and laidillis two,
 Ane milk syth, with ane swyne tail,
 Ane rowsty quihittl to scheir the kail,
 Ane quheill, ane mell the beir to knock,
 Ane coig, ane caird mantand, ane mill,
 Come ye to won our Jenny—Jock?'

Wright's *Dictionary* gives—

'The hollin souples, that were sae snell,
 His back they loundert mell for mell.'

—JAMIESON.

Also—

'The swoople on the end of the hand-staff being whirled round on the barn floor by the barn-man.'—MACTAGGART *Encycl.*

These Scottish references we might close with the one from Robert Burns, himself a wielder of the flail:

'The thresher's weary flinging-tree,
 The lee lang day had tir'd me,
 And when the sun had clos'd his ee
 Far i' the West;
 Ben i' the spence right pensively,
 I gaed to rest.'

Among English references is the Yorkshire one, where (*vide* Walker's *Bards of Bon-Accord*)

'The lusty ploughmen yoke to wark wi' ease,
 And roun' their heeds the whirling swipple flees.'

The following was given to me by Mr. Blakeborough: 'When a couple were keeping company and the man proposed, the girl would, without speaking, break a straw into two pieces, a longer and a shorter, typifying the two parts of the flail. If she gave him the long piece (the handle) she accepted him; but if she gave him the shorter piece, "she gav him t' swipple end" or rejected him. And he was spoken of as one who "had gitten t' swipple end."'

The next two illustrate the change from flail to machine, the late Mr. R. W. Sisson showing me the first, and Mr. N. Temperley drawing attention to the second:

'But treading still as their dull fathers trod;
 Who lived in times when not a man had seen
 Corn sown by drill, or thresh'd by a machine.'

—CRABBE, *The Tales* (1812).

The second is local:

'What changes there hes been, sin aw can meynd lang syne,
 There was ne steam machines, ne railway up the Tyne;
 We thrash'd wor corn wuv sticks—a slow and tedious way;
 But thor machines knock off, twe hundred bouls a day.'

—GEO. CHATT.

The following is a flail story from Sussex, from Mr. Woods, Bungay: 'I knew a man who had three or four lads to assist him, and to get them to work harder when tired, a little before dinner-time he used to call out "This and then," meaning, as they hoped, "This flooring and then dinner." But when he repeated it, they inquired, "This and then, what?" And the old rebel replied "Why, then another!" This is truth, but it did not work many days.'

Then again there is the old song that 'Rita' gives:

'Dame Durden kept five serving girls,
 To carry the milking-pail,
 She also kept five lab'ring men
 To use the spade and flail.

'Twas Mol and Bet, and Doll and Kate,
 And Dorothy Draggletail;
 And John and Dick, and Joe and Jack,
 And Humphrey with the flail.'

Shakespeare, of course, refers to the implement, and Milton (like Burns) allows that it is a tiring tool:

'When in one night, ere glimpse of morn,
 His shadowy Flale hath thresh'd the corn
 That ten day-labourers could not end,
 Then lies him down the Lubbar Fend:
 And stretch'd out all the Chimney's length
 Basks at the fire his hairy strength.'

—*L' Allegro*.

But perhaps the following from Essex in its bearing on the old-time toil of turning wheat into bread is as appropriate as any, and will serve to bring my long paper to a close:

'Two little sticks, attached to a thong,
Will make a man tired, no matter how strong.'

APPENDIX I.

List of agricultural implements, usually found on a Norfolk or Suffolk farm, at the early part of the nineteenth century. Local smiths usually made the iron or steel tools, though not such things as sythes and sickles.

FARM IMPLEMENTS.

Plough.	Pick.	<i>Root Tools—</i>
Roll.	Beetle and wedges.	Turnip crome (puller).
Harrows.	Iron crow bar.	Tailing knife.
Cultivator.	Dibbles.	Scraper.
Scarifier.	Hod for cropping corn	Chopper.
Tumbril.	from.	<i>Barn Tools—</i>
Cart.	Seed tip for sowing corn	Fan.
Waggon.	from.	Sieve.
Toppler.	Iron rake.	Riddle.
Drills (in a few cases).	Fork (three flat tines),	Horse Riddle.
Sythe.	for digging, muck	Halmer.
Sickle.	spreading, etc.	Bushel.
Reaping hook.	Fork (three round tines),	Strike.
Draining spades (top	for digging, muck	Flail.
and bottom).	spreading, etc.	Wooden barn shovel. ¹
Draining scopes (top	Hay knife, fork and	<i>Thatching Tools—</i>
and bottom).	crank.	Bat (Board).
Skuppel (spade).	Short forks.	Rake or Comb, for comb-
Shovel.	Pitching forks.	ing straw.
Pea make (hook).	Muck crome.	Flails, for carrying straw. ²
Dock spud or spade.	Turnip crome.	Crank, for making bands.
Thistle spud.	Hoes.	Ladders.
Mattock.		

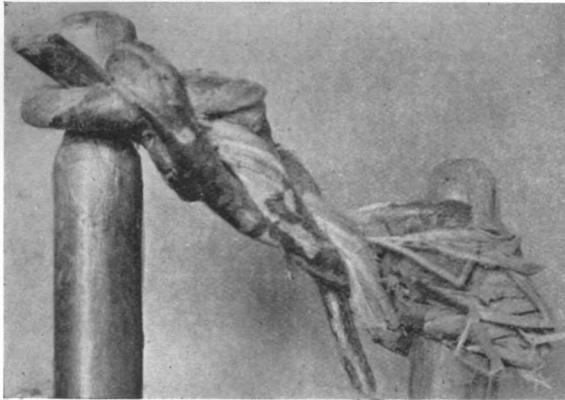
¹ The 'lutchet' of Yorkshire.

² The 'cedan' of Wales.

APPENDIX II.

WELSH FLAILS.

Since my paper was written, Mr. G. Owen Williams, St. Davids, has kindly brought to my notice the primitive west Welsh flail (here illustrated). It is of the simple swivel variety, but is interesting as being entirely composed of wood, *i.e.*, the thong or connexion instead of being of leather is in this instance of wood also. This is flexible, but may go back through the ages to the rigid wooden



PRIMITIVE FLAIL, WEST WALES.

connexions of the East. The thong is made from a two-year-old nut sapling or 'collen.' The end of this was taken in the teeth, after cutting a slit in it. The thumb was inserted into the slit, and the wood was split into about fifteen strands or 'gelt.' These strands were twisted as shown in the photograph to form the connexion of the flail, and join the two grooved sticks together.

APPENDIX III.

BASQUE FARMER AND FLAIL (BILBAO DISTRICT).

This flail (a simple swivel), used with a direct action, has a long beater and a short handle. The British forms have long handles and short beaters, except in County Clare (Ireland). There the flail is identical with that of the Basques in northern Spain.

